REMARKS

The Office Action dated June 21, 2000 has been carefully reviewed. Claims 1-17 are pending in this patent application. Reconsideration of the patent application is respectfully requested in view of the following remarks.

35 U.S.C. § 103(a) Rejection of Claims 1-17 (Garland '390 alone or in view of Reaves '912)

Claims 1-17 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Garland (U.S. Patent No. 5,266,390) alone or in view of Reaves (U.S. Patent No. 5,368,912). Specifically the Examiner states the following on pages 3 and 4 lines 1-20 and lines 1-12, respectively, of the office action:

> Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,266,390 issue to Garland alone, or in view of US Patent 5,368,912 issued to Reaves, as set forth in the Final Rejection, section 8.
>
> Said rejection is maintained despite Applicant's traversal and amendment. Applicant's amendment is directed to correcting 112 issues, rather than amending the claims to overcome the cited prior art. Applicant's arguments have been reviewed carefully, but have not been found persuasive.
>
> Applicant traverses the rejection of said claims over Garland alone by asserting that said rejection is improper and requests documentary proof of said rejection. In response, pages 68-70, 88-89, and 136-138 of M.L. Joseph's *Introductory Textile Science* are submitted. Said pages support the Examiner's position of the Official Notice that cotton and rayon fibers are known for absorbent properties, especially when compared to polypropylene fibers. Joseph specifically teaches the importance of the nonwoven layer being absorbent. Thus, **it would have been obvious to one of ordinary skill in the art to modify the Garland invention, wherein a cotton or rayon nonwoven is substituted for the polypropylene nonwoven layer. Motivation to do so would be to enhance the absorbent properties of the Garland invention.**
>
> In response to Applicant's argument that cotton and rayon fibers are inferior to polypropylene in many aspects, it is asserted that a major objective of Garland's is to have an absorbent nonwoven layer. Thus, the other properties of cotton and rayon which might be inferior to polypropylene are of a lesser importance in the objectives of Garland.
>
> Alternatively, claims 1-17 were rejected as being obvious over Garland in view of Reaves. Applicant traverses said rejection by asserting that Reaves merely teaches woven cotton sheeting and not nonwoven layers. In response, it is asserted that Reaves disclosure of cotton sheeting is exemplary and not limiting in any sense. Reaves clearly teaches the use of films, wovens, or nonwovens for the inventive protective cover (col. 2, lines 52-65). Reaves also clearly teaches that natural or synthetic materials may be used, with cotton and polypropylene being the only two exemplary types. Thus, it is reasserted that

> Reaves teaches the equivalence of polypropylene and cotton fibers, whether woven or nonwoven, as suitable materials for a drapable protective cover.
>
> For the reasons discussed above, the rejection of claims 1-17 over the cited Garland patent alone, or in view of the cited Reaves patent, is hereby maintained. (Emphasis added.)

At page 4, paragraph 8 of the Final Office Action the Examiner states the following:

> [I]t appears that the Examiner's position was not clearly conveyed in the last Office Action. Specifically, it is argued that Garland teaches the importance of the nonwoven to be absorbent. Applicant is hereby given Official Notice that cotton and rayon are known in the art for their absorbent properties. Hence, **it would have been obvious to one skilled in the art to substitute a known absorbent fiber, such as cotton or rayon, for the polypropylene of the Garland invention**. Alternatively, Reaves teaches the equivalency of polypropylene and cotton fibers in a protective cover laminate (col. 2, lines 55-56). Therefore, it would have been obvious to one skilled in the art to substitute cotton fibers for the polypropylene fibers of the Garland invention. **In either case, the motivation to substitute cotton or rayon for the polypropylene would be to improve the hand and the absorbency of the dropcloth of Garland**...(Emphasis added.)

Contrary to the Examiner's argument, Applicant respectfully asserts that it would *not* have been obvious to one of ordinary skill in the art to modify the Garland invention, wherein a cotton or rayon nonwoven is substituted for the polypropylene nonwoven layer. In fact, Garland states the following in column 1, lines 24-31:

> Canvas dropcloths **may permit the fluid product to penetrate and pass through the cloth**, particularly where the fluid product is or has been thinned significantly. Thus, paint thinners and removers can penetrate as well as various paints, particularly if thinned. There is also a **wide range of weights and weaves in this cloth material** which make the product **very inconsistent**. (Emphasis added.)

Furthermore, the Applicants respectfully direct the Examiner's attention to the following definitions of the word "canvas":

> **canvas 1. A closely wov n, heavy cloth of cotton**, hemp, or linen, used for tents, sails, etc...**7. Any fabric of linen, cotton, or hemp of a coarse loose**

> **weave** used as a foundation for embroidery stitches, interlining, etc...(See The Random House Dictionary of the English Language, Second Edition, Unabridged, which is attached hereto as Appendix A: Emphasis added.)
>
> **canvas A firm, closely woven fabric of plain weave made principally from hemp, but also from flax, jute, cotton, or a blend of fibers.** (See McGraw-Hill Dictionary of Science and Technical Terms, Fifth Edition, p. 305, which is attached hereto as Appendix B: Emphasis added.)

In light of the above discussion, the Examiner will appreciate that "canvas" is composed of natural fibers such as cotton. Garland teaches that canvas (i.e. cotton) is not suitable because (i) it may permit the fluid product to penetrate and pass through the cloth, and (ii) the material is inconsistent due to a wide range of weights and weaves. Therefore, Garland specifically teaches that canvas (i.e. cotton) is *not* a suitable substitute for the polypropylene nonwoven layer of his invention. Garland further states the following in column 3, lines 61-66:

> **A most significant characteristic of the spun bonded polypropylene material is an absorbent characteristic** of the materials **which absorbs and holds thin liquids** including moisture, paint thinners, wood stains and solvents and the like. (Emphasis added.)

According to Garland, two significant characteristics of polypropylene are (i) the absorbent characteristic of the material and (ii) the material's ability to hold thin liquids. Also according to Garland, canvas (i.e. cotton) does not hold liquid, rather it permits fluid to penetrate or pass through the cloth. Therefore, it certainly would *not* be obvious to substitute cotton or another natural fiber for the polypropylene layer of Garland's invention as suggested by the Examiner. On the contrary, Garland teaches *against* doing so. Furthermore, based on Garland alone there would be no motivation to enhance the absorbent properties as also suggested by the Examiner because, according to Garland, a *significant* characteristic of the polypropylene material *is an absorbent characteristic* of the materials. If the Examiner maintains the above discussed rejection, the applicant respectfully requests the Examiner to explain why, in light of Garland teaching that canvas is not a suitable material for a dropcloth and that

polypropylene is an exemplary material in that it is absorbent and it holds thin liquids, would one be motivated to substitute cotton?

Reaves does not add anything to Garland relative to Applicant's claimed invention. Applicant's invention expressly includes a *nonwoven* natural fiber. Reaves merely mentions "*woven* fabrics such as cotton sheeting." It is well known in the art that woven and nonwoven fabrics are not always suitable substitutes. As a result, Reaves does not provide the documentary proof of obviousness which is lacking in Garland. Accordingly, Applicant respectfully requests that the rejection be withdrawn.

Conclusion

In view of the foregoing remarks, it is submitted that this application is in condition for allowance. Action to that end is hereby solicited.

Respectfully submitted,

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kan tä'tə)...), n. **1.** a choral composition, and resembling a short oratorio or secular, ama set to music but not to be acted. **2.** a rative set to recitative or alternate recitative ally for a single voice accompanied by one or nents. [1715–25; < It, equiv. to *cant(are)* to nt¹) + *-ata* -ATE¹]

:e (kan'tə trē'chə, -trēs'; *It.* kän'tä trē'-, tə trēs'), n., pl. **-tri·ces** (-trē'chäz, -trē'-sē'), **-tri·ci** (-trē'chē; *It.* -tnē'chē). a professe singer esp. of opera. [(< F) < It < LL of *cantatrix* female singer; see CANTOR.

(kant). See **cant hook.**

kan tēn'), n. **1.** a small container used esp. and hikers for carrying water or other liqeneral store and cafeteria at a military base. here free entertainment is provided for milinel. **4.** a place, as in a factory, school, or up, where refreshments and sometimes perces are sold. **5.** a recreation center or social or teenagers. . a place set up to dispense an emergency. **7.** a snack bar. **8.** *Brit.* a for cutlery and other table utensils. [1730–tine < It *cantina* cellar, perh. deriv. of *canto* CANT²) with *-ina* -INE¹]

an'tər), n. **1.** an easy gallop. —*v.t., v.i.* **2.** ride at a canter. [1745–55; short for *Canter* at a pace like that of Canterbury pilgrims]

tan'tər), n. a person who is much given to ant. [1870–75; CANT¹ + -ER¹]

r·y (kan'tər ber'ē, -bə rē), n., pl. **-buries.** aving sections for holding magazines, sheet ose papers. **2.** a supper tray with partitions and plates. [1840–50; after CANTERBURY,

ir·y (kan'tər ber'ē, -bə rē *or, esp. Brit.,* a city in E Kent, in SE England: cathedral; iastical center of England. 115,600. **2.** a mu- E New South Wales, in SE Australia: a part 115,100. —**Can·ter·bu·ri·an** (kan'tər- adj.

iry bells', (*used with a singular or plural* at, *Campanula medium,* cultivated for its -shaped violet-blue, pink, or white flowers in ns. [1570–80]

ury Tales', The, an uncompleted sequence Chaucer, written for the most part after 1387.

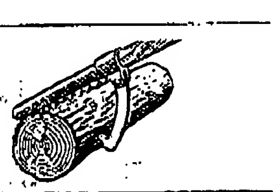
ne', **1.** any of several frames bracketed aft om of a ship and inclined slightly to the foreection. **2.** any transverse frame not perpen he fore-and-aft midship line. [1825–35]

·des (kan thar'i dēz'), *n.pl., sing.* **can·thar·is** (-is). **1.** See **Spanish fly** (def. 1). **2.** See **Spanish fly** (def. 2). [1350–1400; ME < *ntharis* < Gk *kantharís* blister fly]

is (kan'thər əs), n., pl. **-tha·ri** (-thə rī'). [< L < Gk *kántharos*]

(kun'tō'), n. a town in S Vietnam, on the ver. 182,424.

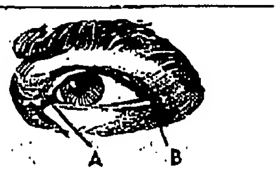
cant hook



ok' (kant), a wooden lever with a movable and a blunt, often toothed tip near the lower chiefly for grasping and canting, or turning Also called **cant dog.** [1840–50]

(kan'thəs), n., pl. **-thi** (-thī). *Anat.* the angle on each side of the eye, formed by the junction per and lower lids. [1640–50; < NL, L < Gk CANT²] —**can'thal,** adj.

canthus
inner canthus
outer canthus



(kan'ti kəl), n. **1.** one of the nonmetrical chants, chiefly from the Bible, used in church **2.** a song, poem, or hymn esp. of praise. 5; ME (< OF) < L *canticulum,* equiv. to *canting* (see CANTICUM) + *-ulum* -ULE]

of Can'ticles, *Douay Bible.* See **Song of The.**

um (kan'ti kəm), n., pl. **-ti·ca** (-ti kə). part of a Roman drama chanted or sung and accommusic. Cf. **diverbium.** [< L, equiv. to *cant(us)* CANTO, CHANT) + *-icum* n. suffix; cf. -IC]

ny (kän tē nyē'), n. a village in N France; 5 first major battle of U.S. forces in World War

...(kan'tl ə nə)... n. a simple, lyric, melodic or voice or instrument. [1730–40; < It < L

depth, so that the upper part is in tension and the lower part in compression. **2.** *Building Trades, Civ. Engin.* any rigid construction extending horizontally well beyond its vertical support, used as a structural element of a bridge (**can'tilever bridge'**), building foundation, etc. **3.** *Aeron.* a form of wing construction in which no external bracing is used. **4.** *Archit.* a bracket for supporting a balcony, cornice, etc. —*v.i.* **5.** to project in the manner of a cantilever. —*v.t.* **6.** to construct in the manner of a cantilever. Also, **cantalever, cantaliver.** [1660–70; perh. CANT² + -I- + LEVER]

can'tilever founda'tion, a building foundation supporting its load partly or wholly upon cantilevers.

can·til·late (kan'tl āt'), *v.t.,* **-lat·ed, -lat·ing.** to chant; intone. [1860–65; < LL *cantillātus* sung low, hummed (ptp. of *cantillāre*), equiv. to *cant-* sing (see CANT¹) + *-ill-* dim. suffix + *-ātus* -ATE¹] —**can'til·la'tion,** n.

Can·til·lon (kän tē yôN'), n. **Ri·chard** (rē shar'; *Eng.* rich'ərd), c1680–1734, French economist, born in Ireland.

can·ti·na (kan tē'nə; *Sp.* kän tē'nä), n., pl. **-nas** (-nəz; *Sp.* -näs). *Southwestern U.S.* a saloon; bar. [1835–45, *Amer.;* < Sp < It; see CANTEEN]

cant·ing (kan'ting), *adj.* affectedly or hypocritically pious or righteous: *a canting social reformer.* [1560–70; CANT¹ + -ING²]

can·tle (kan'tl), n. **1.** the hind part of a saddle, usually curved upward. See illus. under **saddle.** **2.** a corner; piece; portion: *a cantle of land.* [1275–1325; ME *cantel* (< AF) < ML *cantellus,* equiv. to L *cant(us)* (see CANT²) + *-ellus* dim. suffix]

can·tling (kant'ling), n. a layer of burnt brick lying directly over a clamp of bricks being fired. [1610–20; CANTLE + -ING¹]

can·to (kan'tō), n., pl. **-tos.** one of the main or larger divisions of a long poem. [1580–90; < It < L *cant(us)* singing, song, equiv. to *can(ere)* to sing + *-tus* suffix of v. action; cf. CANT¹, CHANT]

can·ton (kan'tn, -ton, kan ton' *for 1–7;* kan ton', -tōn' or, *esp. Brit.,* -to͞on' *for 8*), n. **1.** a small territorial district, esp. one of the states of the Swiss confederation. **2.** (in a department of France) a division of an arrondissement. **3.** *Heraldry.* a square area in the dexter chief, or right-hand corner, of an escutcheon, often distinctively treated: a diminutive of the dexter chief quarter. **4.** *Archit.* a pilaster or similar feature projecting from the corner of a building. **5.** *Obs.* a division, part, or portion of anything. —*v.t.* **6.** to divide into parts or portions. **7.** to divide into cantons or territorial districts. **8.** to allot quarters to (soldiers, troops, etc.). [1525–35; < MF < OPr, deriv. of *can* side, edge (see CANT²)] —**can'ton·al,** *adj.* —**can'ton·al·ism,** n.

Can·ton (kan ton', kan'ton *for 1;* kan'tn *for 2–5*), n. **1.** Also called **Kwangchow, Guangzhou, Kuangchou.** *Older Spelling.* a seaport in and the capital of Guangdong province, in SE China, on the Zhu Jiang. 3,000,000. **2.** a city in NE Ohio: location of the football Hall of Fame. 94,730. **3.** a city in E Massachusetts. 18,182. **4.** a city in W central Illinois. 14,626. **5.** a town in central Mississippi. 11,116.

Can'ton crepe', a thin, light, silk or rayon crepe with a finely wrinkled surface, heavier in texture than crepe de Chine. [1860–65; named after CANTON, China]

Can'ton enam'el, Chinese enamelware similar to Limoges. [1905–10; after CANTON, China]

Can·ton·ese (kan'tn ēz', -ēs'), n., pl. **-ese,** *adj.* —n. **1.** a Chinese language spoken in Canton, the surrounding area of southern China, and Hong Kong. **2.** a native or inhabitant of Canton, China. —*adj.* **3.** pertaining to Canton, China, its inhabitants, or their language. [1855–60; CANTON + -ESE]

Can'ton flan'nel, a plain-weave or twill-weave cotton fabric with a long, fleecy nap usually on one side only, used for sportswear, undergarments, backings and linings, etc. [1880–85; after CANTON, China]

can'ton gin'ger, preserved or crystallized ginger of fine quality. [after CANTON, China]

can·ton·ize (kan'tn īz', kan'tə nīz', kan ton'īz), *v.t.,* **-ized, -iz·ing.** canton (def. 7). Also, *esp. Brit.,* **can'ton·ise'.** [1595–1605; CANTON + -IZE] —**can'ton·i·za'tion,** n.

Can'ton lin'en. See **grass cloth.**

can·ton·ment (kan ton'mənt, -tōn'-; *esp. Brit.* kan-to͞on'mənt), n. **1.** a camp, usually of large size, where men are trained for military service. **2.** military quarters. **3.** the winter quarters of an army. [1750–60; < F *cantonnement,* equiv. to *cantonne(r)* to quarter troops (see CANTON) + *-ment* -MENT]

Can·ton' Riv'er (kan ton'). See **Zhu Jiang.**

can·tor (kan'tər, -tôr), n. **1.** the religious official of a synagogue who conducts the liturgical portion of a service and sings or chants the prayers and parts of prayers designed to be performed as solos. **2.** an official whose duty is to lead the singing in a cathedral or in a collegiate or parish church; a precentor. [1530–40; < L singer, equiv. to *can(ere)* to sing + *-tor* -TOR]

Can·tor (kan'tər; *Ger.* kän'tôr), n. **Ge·org** (gā ôrk'), 1845–1918, German mathematician, born in Russia.

can·to·ri·al (kan tôr'ē əl, -tōr'-), *adj.* **1.** of or pertaining to a cantor. **2.** cantoris. [1785–95; CANTOR + -IAL]

can·to·ris (kan tôr'is, -tōr'-), *adj.* of or pertaining to the gospel or liturgical north side of a church (opposed to decani). ... [1650–60; ... gen. of cantor CANTOR]

Can'tor set', *Math.* the set obtained from the closed

trick by sorcery. **2.** *Chiefly Brit.* actual shamming meant to deceive. [1710–20; appar. dissimilated var. of OE *calcatrippe;* see CALTROP]

cant' strip' (kant), an inclined or beveled strip of wood, for changing the pitch of a roof slope or for rounding out the angle between a flat roof and an adjoining parapet.

can·tus (kan'təs), n., pl. **-tus.** See **cantus firmus.** [1580–90; < L; see CANTO]

can·tus fir·mus (kan'təs fûr'məs), **1.** the ancient traditional unisonal plainchant of the Christian Church, having its form set and its use prescribed by ecclesiastical tradition. **2.** *Music.* a fixed melody to which other voices are added, typically in polyphonic treatment. [1840–50; < ML: lit., firm song]

cant·y (kan'tē, kän'-), *adj.* *Chiefly Scot.* cheerful; lively. [1715–25; < LG *kantig* lively; akin to CANT²] —**cant'i·ly,** *adv.* —**cant'i·ness,** n.

Ca·nuck (kə nuk'), n. *Slang (sometimes offensive).* a Canadian, esp. a French Canadian. [1825–35; perh. ult. to be identified with *kanaka* Hawaiian, South Sea islander (< Hawaiian; see KANAKA), if the word once identified both French Canadians and such islanders, who both were employed in the Pacific Northwest fur trade; later reanalyzed as CAN(ADIAN) + a suffix]

ca·nu·la (kan'yə lə), n., pl. **-las, -lae** (-lē'). *Surg.* cannula.

ca·nu·lar (kan'yə lər), *adj.* cannular. Also, **can·u·late** (kan'yə lāt', -lit).

Ca·nute (kə no͞ot', -nyo͞ot'), n. A.D. 994?–1035, Danish king of England 1017–35; of Denmark 1018–35; and of Norway 1028–35. Also, **Cnut, Knut.**

can·vas (kan'vəs), n. **1.** a closely woven, heavy cloth of cotton, hemp, or linen, used for tents, sails, etc. **2.** a piece of this or similar material on which a painting is made. **3.** a painting on canvas. **4.** a tent, or tents collectively. **5.** sailcloth. **6.** sails collectively. **7.** any fabric of linen, cotton, or hemp of a coarse loose weave used as a foundation for embroidery stitches, interlining, etc. **8.** the floor of a boxing ring traditionally consisting of a canvas covering stretched over a mat. **9.** **under canvas,** **a.** *Naut.* with set sails. **b.** in tents; in the field: *the troops under canvas.* [1225–75; ME *canevas* < AF, ONF < VL *cannabāceus* (n. use of adj.), equiv. to L *cannab(is)* HEMP + *-āceus* -ACEOUS] —**can'vas·like',** *adj.*

can·vas·back (kan'vəs bak'), n., pl. **-backs,** (*esp. collectively*) **-back.** a North American wild duck, *Aythya valisineria,* the male of which has a whitish back and a reddish-brown head and neck. [1595–1605, *Amer.;* after the canvaslike color of its back]

can·vass (kan'vəs), *v.t.* **1.** to solicit votes, subscriptions, opinions, or the like from. **2.** to examine carefully; investigate by inquiry; discuss; debate. —*v.i.* **3.** to solicit votes, opinions, or the like. —*n.* **4.** a soliciting of votes, orders, or the like. **5.** a campaign for election to government office. **6.** close inspection; scrutiny. [1500–10; orig. sp. var. of CANVAS, as a v.; sense "discuss" appar. development of the earlier senses "toss in a canvas sheet," "harshly criticize"; sense "solicit votes" obscurely derived] —**can'vass·er,** n.
—**Syn. 2.** analyze, scrutinize, explore.

can·yon (kan'yən), n. a deep valley with steep sides, often with a stream flowing through it. Also, **cañon.** [1835–45, *Amer.;* < AmerSp, Sp *cañón* a long tube, a hollow, equiv. to *cañ(a)* tube (< L *canna* CANE) + *-on* aug. suffix]
—**Syn.** gorge, gully, ravine, pass, gap, arroyo, coulee.

Can·yon (kan'yən), n. a town in N Texas. 10,724.

Can'yon·lands Na'tional Park' (kan'yən landz'), a national park in SE Utah, at the junction of the Colorado and Green rivers: site of geologic interest. 527 sq. mi. (1366 sq. km).

can'yon wind' (wind), **1.** a nocturnal, down-canyon flow of air caused by the cooling of the canyon walls. Cf. **valley wind.** **2.** a wind modified in direction and speed by being forced to blow through a canyon or gorge.

can·zo·na (kan zō'nə; *It.* kän tsô'nä), n., pl. **-nas** (-nəz; *It.* -ne). canzone.

can·zo·ne (kan zō'nē; *It.* kän tsô'ne), n., pl. **-nes, -ni** (-nē). **1.** a variety of lyric poetry in the Italian style, of Provençal origin, that closely resembles the madrigal. **2.** a poem in which each word that appears at the end of a line of the first stanza appears again at the end of one of the lines in each of the following stanzas. Also, **canzona.** [1580–90; < It < L *cantiōnem,* acc. sing. of *cantio* song; see CANTO, -ION]

can·zo·net (kan'zə net'), n. an early polyphonic song of dancelike character. [1585–95; < It *canzonetta.* See CANZONE, -ETTE]

Cao·da·ism (kou dī'iz əm), n. an eclectic religion, originated in Cochin-China in 1926, combining Buddhist, Taoist, and Confucianist elements and affected to some extent by Christianity. [1935–40; < Vietnamese *cao đài* + -ISM]

caou·tchouc (kou'cho͝ok, kou cho͞ok'), n. **1.** rubber¹ (def. 1). **2.** pure rubber. [1765–75; < F < Sp *cauchuc* (now obs.), prob. ult. < an Indian language of lowland tropical South America]

Cao Yu (tsou' yœ'). (*Wan Jiabao*) born 1910, Chinese playwright.

THE RANDOM HOUSE DICTIONARY OF THE ENGLISH LANGUAGE

Second Edition

Unabridged

cantilever spring [MECH ENG] A flat spring supported at one end and holding a load at or near the other end. { 'kant·əl,ē·vər ,spriŋ }

cantilever vibration [MECH] Transverse oscillatory motion of a body fixed at one end. { 'kant·əl,ē·vər vī'brā·shən }

canting [MECH] Displacing the free end of a beam which is fixed at one end by subjecting it to a sideways force which is just short of that required to cause fracture. { 'kant·iŋ }

canting strip *See* water table. { 'kant·iŋ ,strip }

canton crepe [TEXT] Thick, slightly ribbed crepe, originally made of silk in Canton, China. { 'kan'tän 'krāp }

Cantor diagonal process [MATH] A technique of proving statements about infinite sequences, each of whose terms is an infinite sequence by operation on the *n*th term of the *n*th sequence for each *n*; used to prove the uncountability of the real numbers. { 'kän·tȯr dī'ag·ən·əl ,präs·əs }

Cantor function [MATH] A real-valued nondecreasing continuous function defined on the closed interval [0,1] which maps the Cantor ternary set onto the interval [0,1]. { 'kän·tȯr ,fəŋk·shən }

Cantor's axiom [MATH] The postulate that there exists a one-to-one correspondence between the points of a line extending indefinitely in both directions and the set of real numbers. { 'kan·tərz 'ak·sē·əm }

Cantor ternary set [MATH] A perfect, uncountable, totally disconnected subset of the real numbers having Lebesgue measure zero; it consists of all numbers between 0 and 1 (inclusive) with ternary representations containing no ones. { 'kän·tȯr 'tər·nə·rē ,set }

Cantor theorem [MATH] A theorem that there is no one-to-one correspondence between a set and the collection of its subsets. { 'kän·tȯr 'thir·əm }

cant strip [BUILD] **1.** A strip placed along the angle between a wall and a roof so that the roofing will not bend sharply. **2.** A strip placed under the edge of the lowest row of tiles on a roof to give them the same slope as the other tiles. { 'kant ,strip }

can-type combustors *See* cannular combustion chambers. { 'kan ,tīp kəm'bəs·tərz }

canvas [TEXT] A firm, closely woven fabric of plain weave made principally from hemp, but also from flax, jute, cotton, or a blend of fibers. { 'kan·vəs }

canvas duck [TEXT] A lightweight cotton or linen cloth; the term is occasionally used for heavier canvases as well. { 'kan·vəs 'dək }

canyon [GEOGR] A chasm, gorge, or ravine cut in the surface of the earth by running water; the sides are steep and form cliffs. { 'kan·yən }

canyon bench [GEOL] A steplike level of hard strata in the walls of deep valleys in regions of horizontal strata. { 'kan·yən ,bench }

canyon fill [GEOL] Loose, unconsolidated material which fills a canyon to a depth of 50 feet (15 meters) or more during periods between great floods. { 'kan·yən ,fil }

canyon wind [METEOROL] Also known as gorge wind. **1.** The mountain wind of a canyon; that is, the nighttime down-canyon flow of air caused by cooling at the canyon walls. **2.** Any wind modified by being forced to flow through a canyon or gorge; its speed may be increased as a jet-effect wind, and its direction is rigidly controlled. { 'kan·yən ,wind }

caoutchouc [MATER] Formerly, crude rubber which had been cured over a fire into a solid, dark mass for shipment. { 'kaù'chük }

cap [ENG] A detonating or blasting cap. [GEN] In many eukaryotic messenger ribonucleic acids, the structure at the 5′ end consisting of 7′-methyl-guanosine-pppX, where X is the first nucleotide encoded in the deoxyribonucleic acid; it is added posttranscriptionally. [MATH] The symbol ∩, which indicates the intersection of two sets. [MIN ENG] **1.** A piece of timber placed on top of a prop or post in a mine. **2.** The horizontal section of a set of timber that is used as a support in a mine roadway. { kap }

Cap *See* Capricornus.

capability list [COMPUT SCI] A row of an access matrix that contains the access rights of a given user to various files and other resources of a computer system. { ,kā·pə'bil·əd·ē ,list }

capacitance [ELEC] The ratio of the charge on one of the conductors of a capacitor (there being an equal and opposite charge on the other conductor) to the potential difference between the conductors. Symbolized C. Formerly known as capacity. [ENG] In a closed feedwater heater, the volume of water required for proper operation of the drain control valve. { kə'pas·ə·təns }

capacitance altimeter [ENG] An absolute altimeter which determines height of an aircraft aboveground by measuring the variations in capacitance between two conductors on the aircraft when the ground is near enough to act as a third conductor. { kə'pas·ə·təns al'tim·əd·ər }

capacitance box [ELEC] An assembly of capacitors and switches which permits adjustment of the capacitance existing at the terminals in nominally uniform steps, from a minimum value near zero to the maximum which exists when all the capacitors are connected in parallel. { kə'pas·ə·təns ,bäks }

capacitance bridge [ELEC] A bridge for comparing two capacitances, such as a Schering bridge. { kə'pas·ə·təns ,brij }

capacitance hat [ELECTROMAG] A network of wires that is placed at the top of an antenna either to increase its bandwidth or to lower its resonant frequency. { kə'pas·əd·əns ,hat }

capacitance level indicator [ENG] A level indicator in which the material being monitored serves as the dielectric of a capacitor formed by a metal tank and an insulated electrode mounted vertically in the tank. { kə'pas·ə·təns 'lev·əl 'in·də,kād·ər }

capacitance meter [ENG] An instrument used to measure capacitance values of capacitors or of circuits containing capacitance. { kə'pas·ə·təns ,mēd·ər }

capacitance-operated intrusion detector [ENG] A boundary alarm system in which the approach of an intruder to an antenna wire encircling the protected area a few feet above ground changes the antenna-ground capacitance and sets off the alarm. { kə'pas·ə·təns 'ap·ə,rād·əd in'trü·zhən di'tek·tər }

capacitance probe [PETRO ENG] A sensing device that determines the dielectric constants of the oil and water components of an oil-water emulsion. { kə'pas·əd·əns ,prōb }

capacitance relay [ELECTR] An electronic relay that responds to a small change in capacitance, such as that created by bringing a hand near a pickup wire or plate. { kə'pas·ə·təns 'rē,lā }

capacitance standard *See* standard capacitor. { kə'pas·ə·təns ,stan·dərd }

capacitive coupling [ELEC] Use of a capacitor to transfer energy from one circuit to another. { kə'pas·ə·tənz ,kəp·liŋ }

capacitive diaphragm [ELECTROMAG] A resonant window used in a waveguide to provide the equivalent of capacitive reactance at the frequency being transmitted. { kə'pas·əd·iv 'dī·ə,fram }

capacitive-discharge ignition [ELECTR] An automotive ignition system in which energy is stored in a capacitor and discharged across the gap of a spark plug through a step-up pulse transformer and distributor each time a silicon controlled rectifier is triggered. { kə'pas·əd·iv 'dis,chärj ig'nish·ən }

capacitive-discharge pilot light [ELECTR] An electronic ignition system, operating off an alternating-current power line or battery power supply, that produces a spark for lighting a gas flame. { kə'pas·əd·iv 'dis,chärj 'pī·lət ,līt }

capacitive divider [ELEC] Two or more capacitors placed in series across a source, making available a portion of the source voltage across each capacitor; the voltage across each capacitor will be inversely proportional to its capacitance. { kə'pas·əd·iv di'vīd·ər }

capacitive electrometer [ENG] An instrument for measuring small voltages; the voltage is applied to the plates of a capacitor when they are close together, then the voltage source is removed and the plates are separated, increasing the potential difference between them to a measurable value. Also known as condensing electrometer. { kə'pas·əd·iv i,lek'träm·əd·ər }

capacitive feedback [ELECTR] Process of returning part of the energy in the plate (or output) circuit of a vacuum tube (or other device) to the grid (or input) circuit by means of a capacitance common to both circuits. { kə'pas·əd·iv 'fēd,bak }

capacitive load [ELECTROMAG] A load in which the capacitive reactance exceeds the inductive reactance; the load draws a leading current. { kə'pas·əd·iv 'lōd }

capacitive loading [ELECTROMAG] **1.** Raising the resonant frequency of an antenna by connecting a fixed capacitor or capacitors in series with it. **2.** Lowering the resonant frequency of an antenna by installing a capacitance hat. { kə'pas·əd·iv 'lōd·iŋ }

capacitive post [ELECTROMAG] Metal post or screw extending across a waveguide at right angles to the E field, to provide

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